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9. February 2012

Online at <https://mpa.ub.uni-muenchen.de/36543/>

MPRA Paper No. 36543, posted 9. February 2012 09:01 UTC

# **The political economy of development assistance: peril to government quality dynamics in Africa**

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# **The political economy of development assistance: peril to government quality dynamics in Africa**

## **Abstract**

This paper assesses the effectiveness of foreign aid in improving government institutions in 52 African countries using updated data(1996-2010). Findings suggest development assistance deteriorates government quality dynamics of corruption-control, political-stability, rule of law, regulation quality, voice and accountability and government effectiveness. It is therefore a momentous epoque to solve the second tragedy of foreign aid; high time economists and policy makers start rethinking the models and theories on which foreign aid is based. In the meantime, it is up to people who really care about the poor to hold aid agencies accountable for results.

*JEL Classification:* B20; F35; F50; O10; O55

*Keywords:* Foreign Aid; Political Economy; Development; Africa

## **1. Introduction**

For over five decades the political economy of foreign aid has been widely debated in academic and policy-making circles. A large literature on institutions and development suggests that Africa is poor because it has poor institutions: dictatorship, lack of property rights, weak courts and contract enforcement, high corruption, political instability, violence and hostile regulatory environment for private business. According to this view, in order to end African poverty, the West needs to promote good institutions. In 2005 the West tried hardest to salvage Africa. In July of that year, the G8 agreed to double foreign aid to Africa from \$25 billion a year to \$50 billion to finance the 'Big push', as well as scrap African aid loans contracted during previous attempts at a 'Big push'. Prior to this effort, Africa was already the most aid-intensive continent in the world. In September of that same year, world leaders met at the United Nations to further discuss progress on ending poverty in Africa. To point out some alarming statistics, sub-Saharan Africa makes-up 11% of the world's population, but produces only 1% of the world's GDP(Easterly,2005a). In the median African nation, 43% of the population survive on less than one dollar a day. On the World Food Program list, of the twenty-three countries with more than 35% of the population malnourished, seventeen are in Africa. The long and brutal civil wars in Angola, Chad, Somalia, Sierra Leon, Liberia...etc, not to mention Rwanda's genocide and recent carnages in Darfur-Sudan and the Democratic Republic of Congo (registering the world's highest war casualties since World War Two). In fact, seven of the 8 recent cases of total societal breakdown into anarchy in the world known to literature have been in Africa: Angola, Burundi, Liberia, Sudan, Sierra Leone, Somalia and Zaire/Congo(beside Afghanistan).

In assessing the impact of development assistance, a great bulk of studies have focused on the effect of aid flows on GDP growth and other macroeconomic variables (investment or public consumption). The underlying assumption here is that aid is destined to bridge the saving-investment gap poor countries face (Rostow, 1960; Chenery & Strout, 1966; Easterly, 2005a). Surprisingly there has been much less research conducted on the impact of foreign aid on the evolution of government institutions. More so, a great bulk of research on the African aid-growth nexus has been premised on data collected before the year 2000 with less emphasis placed on the role development assistance play in good governance trends. The contribution of this paper to the literature is threefold. Firstly, we cut adrift the mainstream approach to the aid-development nexus by assessing government quality effects of development assistance. Secondly, a great bulk of literature is based on data collected between 1960 and 1995. Thus by using recent data (1996-2010), this paper provides an updated account of governance trends in the nexus. Thirdly, the focus on 52 of the 54 African countries provides broad and inclusive views on the continent where the aid-development debate is most tensed. The remainder of this paper is presented as follows. Section 2 thoroughly examines existing literature on the aid-development nexus. Data and methodology are respectively presented and outlined in Section 3. Empirical analysis, corresponding discussion, policy implications and limitations are covered in Section 4. Section 5 concludes.

## **2. Literature review**

### **2.1 Conflicts in the literature**

The literature on the effectiveness of aid has almost exclusively been oriented towards the macroeconomic impacts of aid; assessing the effects of aid on economic savings, investment and growth. The low-depth of analytical framework, heavy reliance on empirical evidence (which

is often ambiguous at best) and inconclusive results with recently refined methodologies(Masud & Yontcheva,2005), leaves the subject matter widely open to debate. For the purpose of clarity, literature pertaining to the effectiveness of aid on growth(development) could be classified into two strands as summarized in Table 1: one acknowledging the negative consequences of aid and the other advocating the positive rewards of development assistance.

**Table 1: Summary of conflicts in the literature**

<b>Researchers</b>	<b>Main findings</b>
<b>First-strand: Aid does not lead to growth(development)</b>	
Mosley et al. (1992)	Aid increases unproductive public consumption and fails to promote growth.
Reichel(1995)	Aid fails to promote savings owing to the substitution effect.
Ghura(1995)	Aid negatively impacts savings.
Boone(1996)	Aid is insignificant in improving economic development for two reasons: poverty is not caused by capital shortage and it is not optimal for politicians to adjust distortionary policies when they receive aid flows.
Pedersen (1996)	Foreign Aid distorts development and leads to aid dependency.
<b>Second-strand : Aid improves growth(development)</b>	
Burnside & Dollar(2000)	Aid can be effective when policies and economic management are good.
Ghura(1995)	Aid positively impacts savings for good adjusters.
Guillaumont & Chauvet (2001)	Aid effectiveness is contingent on environmental factors(shocks and hazards)
Collier & Dehn(2001)	Aid effectiveness depends on negative supply shocks. Targeting aid contingent of negative supply shocks is better than ‘targeting’ based on good policies.
Collier & Dollar(2001)	The positive effect of aid on poverty depends on its impact on per-capita income growth; and impact of per-capita income growth on poverty reduction.
Feeny (2003)	The sectoral allocation of foreign aid to Papua New Guinea has been broadly in line with a strategy to effectively reduce poverty and increase human well-being.
Gomanee et al.(2003)	Aid has either a direct effect on welfare and indirect effect through public spending on social services.
Clement et al. (2004)	Aid has a short-term positive impact on growth
Ishfaq (2004)	Foreign Aid, in a limited way though, has helped in reducing the extent of poverty in Pakistan.
Mosley et al. (2004)	Foreign assistance has an indirect impact on poverty and the well-being of recipient countries.
Addison et al. (2005)	Aid increases pro-poor public expenditure and has a positive effect on growth. Aid broadly works to mitigate poverty, and poverty would be higher in the absence of aid.
Fielding et al. (2006)	There is a straight forward positive impact of aid on development outcomes.

Source(Author)

The first strand includes authors presenting the case for the insignificant impact of aid on investment, savings or growth. Aid has been shown to improve unproductive public consumption(Mosley et al.,1992) and stops short of increasing investment. This later point has

been confirmed by Boone(1996) and Reichel(1995). Ghura(1995) has pointed to the negative effect of aid on domestic savings while Pedersen (1996) asserts, foreign aid distorts development and leads to aid dependency.

In the second strand, we find studies in favor of the positive effects of aid on growth and development. Among these works, we shall highlight that of Burnside & Dollar(2000) who conclude on the effectiveness of aid when policies are good. The Burnside & Dollar(2000) paper has received abundant comments from researchers(Guillaumont & Chauvet, 2001; Colier & Dehn, 2001; Easterly et al., 2003); comments which have been challenged as being “extremely data dependent”(Clemens et al.,2004).

## **2.2 Africa's needs and Western responses**

The bulk of African countries lie quite low on standard international comparisons. According to Easterly(2005a), they occupy most of the bottom places in income per capita, percentage of population living in extreme poverty(less than one US dollar a day), life expectancy, infant mortality, literacy, AIDS prevalence and the HDI. The last four decades have been those of extreme growth dismay in Africa. The West has reacted to Africa's tragedy with intensive involvement of foreign aid agencies and international organizations. On average African countries receive much more aid in terms of percentage GDP than other developing countries. The West does more because Africa is poor, however its efforts are supposed to have positive impacts on GDP and development.

The year 2005 was that during which the West pressed hardest to save Africa. In July of that year, the G8 agreed to double foreign aid to Africa from \$25 billion a year to \$50 billion to finance the 'Big push', as well as erase African aid loans contracted during previous attempts at a 'Big push'. Before this effort, Africa was already the most aid-intensive region on the planet.

In September of that same year, world leaders gathered at the United Nations to further discuss progress on ending poverty in the continent.

## **2.3 Theories and effects of Western assistance on Africa**

### *2.3.1 The Big-Push models and foreign aid*

In line with Easterly(2005a), “*Big-Push*” models suggest that Africa is poor because it is stuck in a “poverty trap”. To emerge from the poverty trap, the continent need’s a large aid-financed increase in investment; a “Big Push”. Both the Harrod-Domar and the Solow growth models have been used to discuss the mechanisms of the poverty trap. The first mechanism is that, savings are quite low for people who are very close to subsistence(as outlined by a Stone-Geary utility function). In a closed economy, saving and investment are equal, thus investment is low. In the Harrod-Domar model with the capital constraint binding, per capita growth in GDP is simply a linear function of the investment(=saving) rate minus the population and depreciation rates. If the saving is quite low to compensate for population growth and the depreciation of capita, then per capita growth in GDP will zero or negative. In the 1950s and 1960s, early development economists postulated a desirable per capita growth rate and calculated the “investment requirement” to meet this target: the margin between the low domestic saving rate and the “investment requirement” was termed the “Financing Gap”. The purpose of aid was to cover the Financing Gap(Rostow,1960; Chenery & Strout,1966). Thus this model foresaw a strong growth effect for foreign aid through its role in boosting domestic investment above what domestic savings would finance. Although this model soon went out of favor in the academic literature on development, it remained somehow relevant in international organizations like the World Bank. Current policy proponents promoting foreign aid to Africa have explicitly cited this model(Devarajan et al., 2002 at the World Bank; Blair Commission on Africa,2005; Sachs,



2005). Sach(2005) posits: *“success in ending the poverty trap will be much easier than it appears”*. He asserts that the increase in foreign aid and debt relief can end Africa’s poverty in our generation. In a closed economy, saving depends not only on the margin from subsistence but also on the incentive to save depending on the rate of return to saving and investment. In an open economy for instance, investment is not only a function of domestic saving but also depends on the rate of return to investment. As shown by Africa’s extensive capital flight in which an estimated 39% of African capital stock is held outside the continent(Collier et al.,2001), domestic investors compare the returns to domestic and foreign investments: since private foreign investors and bank lenders will invest in the economy if returns are very attractive. In the Solow model, a strong relationship between income and savings rates could generate multiple equilibria at low and high benchmarks of capital stock, resurfacing the possibility of a poverty trap. Again, the low domestic savings do not pose much of an issue in an open economy in which investment responds to incentives. Kraay & Raddatz(2005) have shown that the relationship between initial capital and savings must follow an S-shaped curve to generate a poverty trap; however they stop short of finding evidence for this shape in the data.

The second poverty generating mechanism is some kind of nonconvexity of the production function in the Solow model. There could be strong external economies to investment or there maybe high fixed costs to investment projects such that a minimum benchmark must be surpassed for investment to be productive. This notion inspired the original article that first proposed a Big Push(Rosentein-Rodan,1943). This strand has had a longer shelf-life in the academic literature than the “Financing Gap” model(mechanism) because of the great zeal of theorists in models with multiple equilibria( Murphy et al., 1989). In emphasizing such nonconvexities, Sach(2005) posits that Africa is in a poverty trap. ‘Big Push’ models foretell

strong impacts of aid on investment and growth(development). This prediction has been subject to a vast empirical literature which this paper has already highlighted and summarized above(see Section 2.1 and Table 1).

### *2.3.2 Project interventions: education and health*

Another view of Africa's poverty has been that, it results from low human capital(poor health and education) and infrastructure. This emphasis which began in the 1960s is still a major theme in explaining Africa's poverty. While enrollments have expanded rapidly, the quality of education is hampered by missing inputs like textbooks and other school material, weak incentives for teachers, corruption in education bureaucracies and disruption of schooling by political crisis(Filmer & Pritchett, 1997). In health, some of the initial progress has slowed, possibly due to corruption in the health system( studies in Cameroon, Guinea, Uganda and Tanzania estimated that 30 to 70% of government drugs disappeared before reaching patients) and more complicated health problems cannot be solved with routine methods(Filmer et al., 2000; Pritchett & Woolcock,2004).

### *2.3.3 Models of policies and growth*

The structural adjustment programs emerged from another perspective of why Africa remains poor and this gained prominence in the early 1980s with the advent of the "Washington consensus" and the pro-free markets arguments of people like the World Bank chief economist Anne Krueger. According to this thesis, Africa is poor because its governments have chosen bad policies. Indeed, it is obvious that many African governments pursued policies very detrimental to growth and economic development: artificially overvalued currencies, high black market premiums on foreign exchange, controls on interest rates that led to negative real interest rates

for savers, drastic(radical) restrictions on international trade and reliance on state enterprise. The “bad policies” view of Africa’s poverty led to a different perception of the role of aid. The role of Western donors and international institutions in this view was to induce changes in policy in Africa by making aid contingent on such changes. Structural adjustment loans of the IMF and the World Bank were thus embodied in this framework: which had as goal an “adjustment with growth”. How successful were these loans in facilitating macroeconomic “adjustment”, that is to say: changing policy? How successful was development assistance in inducing appealing policies? The answer appears to be that Western donors and international institutions have not been very successful in changing policy(Alesina & Dollar, 2002; Burnside & Dollar, 2000; Van de Walle, 2001; Easterly,2005b). However these studies are premised on old data. Perhaps using much recent data(as this paper aims)could provide different trends.

#### *2.3.4 Dysfunctional donors*

Concurring with Westerly(2005a), while all the attention in the ‘aid and development’ debate is focused on Africa, it is also interesting to assess how effective donors were in delivering valuable services to the continent. There have been uncomfortable signs of donor dysfunction. A case in point is the over 2 billion US dollars spent on roads in Tanzania over the last 20 years. Yet roads did not improve. Even by bureaucratic standards, foreign aid bureaucracy is dire. Why? Perhaps it is because efforts and results in aid are largely unobservable and noticed only by the voiceless and powerless poor. Thus, the lack of visibility on feed-backs and results makes aid bureaucracies unaccountable. Unlike democratic governments or private firms in wealthy countries, aid agencies do not face a “voter test” or “a market test”. Africa’s poor could be conceived as political orphans; with no voice or feedback on if aid is helping and nobody accountable to them.

## **2.4 Aids, institutions and development**

An extensive literature on institutions and development suggests that Africa is poor because it has poor institutions: dictatorship, lack of property rights, weak courts and contract enforcement, violence and political instability, hostile regulatory environment for private business and high inflation. In a bid to end African poverty, according to this perspective the West needs to promote good institutions. Svensson(2000) finds that aid increases corruption in ethnically fractionalized states (which is the situation of most African countries). The findings of Knack(2001) suggest that higher aid worsens bureaucratic quality, leads to violating the law with great impunity and more corruption(controlling for potential reverse causality). Similarly, Djankov et al.(2005) notice that high aid caused setbacks to democracy between 1960 and 1999. Indeed they found aid's effect on democracy to be worse than that of the 'natural resource curse'.

From the interesting literature on aid and institutions, in examining whether donors can still influence institutions at the margin, three questions have received some attention. First, do donors give more to poor countries who have better institutions(e.g less corruption, more democracy)? Second, does aid induce better or worse institutional quality? Third, how would outsiders engineer a transition from the present state of informal institutions towards more formal institutional settings? The first question is relevant because donors widely assumed that aid would be more effective in countries with better institutions. The answer to the first concern also affects the response to the second. Thus, if donors give more aid to countries with better institutions, this would create some incentive for reformers in the recipient country to adapt better institutions. Alesina & Dollar(2000) and Alesina & Weder(2002) find no evidence that democracies or less corrupt states are rewarded with more aid. The focus of this paper is the second question. Then there is the thorny third issue about how aid would practically go about

changing institutions in the interest of Africa. The transition from informal to formal institutions is somehow complex. Attempts by Western aid agencies to introduce top-down formal institutions have not fared well in the complicated maze of bottom-up arrangements. Dixit(2004) has an interesting argument as to how introducing imperfect rule-based institutions could actually make things worse, as they create outside opportunities for members of relationship-based networks. Network members can then cheat on their partners and exit to operate in the rule-based system. A society could get caught in-between formal and informal institutions with neither working well. Before closing this section, it is worthwhile noting that this part of the literature has guided our choice of the government quality determinants we shall use in the analytical phase of this paper. These include: control of corruption, government effectiveness, political stability(no violence), voice and accountability, rule of law and regulation quality.

## **2.5 The scope of the current paper**

In line with Clement et al.(2004), aggregate aid could be divided into three categories: (1) emergency and humanitarian aid(likely to be negatively correlated with growth); (2) aid that affects growth only over the long-term(if at all), such as aid to support democracy, the environment, health or education; and (3) aid that plausibly could stimulate growth in the long term, including budget and balance of payments support, investments in infrastructure and aid for productive sectors such as agricultural and industrial. Whereas aid effectiveness papers implicitly define donors' objective as solely the promotion of economic growth or the reduction of poverty in the recipient countries, a parallel strand of literature on aid allocation has shown that most donors often pursue a different underlying agenda by allocating aid according to their own strategic interest. Masud & Yontcheva(2005) have underlined that if a significant part of aid is allocated for strategic purposes, no positive impact in terms of growth or poverty alleviation

should be expected. We partially negate this claim by asserting that, foreign aid irrespective of vested interest should contribute to institutional development(degradation) either directly or indirectly.

The contribution of this paper to the literature is threefold. Firstly, a great chunk of the literature is based on data collected between 1960 and 1995. By using recent data(1996-2010), this paper provides an updated account on the trends in the nexus. Secondly, we focus mainly on Africa where the aid-institutions debate is most tensed. While previous studies have mixed countries in various continental regions or focused on a restricted set of countries owing to constraints in data availability, this paper uses data on 52 African countries. Thirdly, the African geopolitical landscape has been recently marked by a wave of revolutions and social-unrests owing to popular demands for institutional changes(Jasmine revolution and its contagion). Findings from this paper could be relevant in providing policy recommendations as to if foreign-aid could influence government quality in aid-recipient countries.

### **3. Data and Methodology**

#### **3.1 Data**

We investigate a panel of 52 African countries with data from African Development Indicators (ADI) of the World Bank (WB) ranging from 1996 to 2010. Corresponding variables and countries are presented in the appendices (Appendix 3 and Appendix 4 respectively). Borrowing from the IMF (2005) definition and the literature in Section 2.4, government quality dependent variables include: corruption-control, government-effectiveness, voice and accountability, political stability or no violence, rule of law and regulation quality. The independent variable is Net Official Development Assistance(NODA). For robustness purposes we use total NODA, NODA from multilateral donors and NODA from the Development

Assistance Committee(DAC) countries. Instrumental variables are: legal-origins, income-levels and religious-dominations. These instruments have been substantially documented in the economic development literature (La Porta et al., 1997; Beck et al., 2003; Agbor, 2011; Asongu, 2011ab). In the regressions we control for openness(trade) and population growth at the first-stage and only for democracy and public investment at the second-stage. The choice of control variables is also contingent on the degrees of freedom necessary for overidentifying restrictions tests at second-stage regressions(more than two control variables will result in exact or under-identification; meaning instruments are either equal to or less than the number of endogenous explaining variables respectively). Summary statistics and correlation analysis are also presented in the appendices(Appendix 1 and Appendix 2 respectively). While the former indicates that the distributions of the variables are comparable, the later guides the empirical analysis in avoiding issues related to multicollinearity and overparametization.

## **3.2 Methodology**

### *3.2.1 Endogeneity*

While development assistance has a bearing on the development of the recipient country(Addison et al., 2005; Fielding et al.,2006), the reverse effect cannot be ruled-out as aid from donor agencies(countries) is contingent on institutional and developmental characteristics. Such factors maybe environmental(Guillaumont & Chauvet, 2001), supply-shocks(Collier & Dehn, 2001) or even effective policies and economic management standards(Burnside & Dollar, 2000). We are thus faced with a concern of endogeneity owing to reverse-causality and omitted variables, as the NODA indicators are correlated with the error term in the equation of interest. To address this concern we shall assess the presence of endogeneity with the Hausman-test and hence employ an estimation technique that takes account of the endogeneity issue.

### 3.2.2 Estimation technique

Concurring with Beck et al.(2003) and recent African law-finance literature(Asongu, 2011cd) the paper adopts an Instrumental Variable(IV) estimation method. Estimation by IV addresses the puzzle of endogeneity and thus avoids the inconsistency of estimated coefficients by Ordinary Least Squares (OLS) when the exogenous variables are correlated with the error term in the main equation. In line with Asongu (2011cde), the Two-Stage-Least-Squares (TSLS) estimation method adopted by this work will entail the following steps.

First-stage regression:

$$NODA_{it} = \gamma_0 + \gamma_1(\text{legalorigin})_{it} + \gamma_2(\text{religion})_{it} + \gamma_3(\text{incomelevel})_{it} + \alpha_i X_{it} + v \quad (1)$$

Second-stage regression:

$$Gov'tQuality_{it} = \gamma_0 + \gamma_1(NODA)_{it} + \beta_i X_{it} + \mu \quad (2)$$

In the two equations,  $X$  represents the set of control variables. For the first and second equations, respectively  $v$  and  $u$ , denote the disturbance terms. Instrumental variables include legal-origins, dominant-religions and income-levels. NODA stands for Net Official Development Assistance: the foreign aid indicator.

We adopt the following steps in the analysis:

- firstly, justify the choice of a TSLS over an OLS estimation technique with the Hausman-test for endogeneity;
- secondly, show the instruments are exogenous to the endogenous components of explaining variables (aid channels), conditional on other covariates (control variables);
- lastly, ensure the instruments are valid and not correlated with the error-term in the main equation with an Over-identifying Restrictions (OIR) test.



### *3.2.3 Robustness checks*

To ensure robustness of the analysis, the following checks will be carried out: (1) usage of alternative indicators of Government Quality(GQ) dynamics; (2) employment of two distinct interchangeable sets of moment conditions that encompass every category of the instruments; (3) usage of alternative aid indicators; (4) account for the concern of endogeneity; (5) estimation with robust Heteroscedasticity and Autocorrelation Consistent(HAC) standard errors.

## **4. Empirical Analysis**

This section addresses the ability of the exogenous components of NODA dynamics to account for differences in GQ dynamics; the ability of the instruments to explain variations in the endogenous components of NODA dynamics and the possibility of the instruments to account for GQ dynamics beyond NODA dynamic channels. To make these examinations we use the panel TSLS-IV estimation method with legal-origins, income-levels, and religious-dominations as instrumental variables.

### **4.1 Development assistance and instruments**

Table 2 below investigates the validity of the instruments in explaining cross-country differences in NODA dynamics. Clearly, it could be noticed that distinguishing African countries by legal-origins, income levels and religious-dominations help explain cross-country differences in NODA. Based on the Fisher-test, the instruments taken collectively enter significantly in all regressions at the 1% significance level. Broadly the following conclusions could be established. (1) Christian-dominant countries have benefited more or less in foreign-aid than their Islam-oriented counterparts depending on the NODA dynamic. (2) In line with common sense and economic theory, Low-income countries receive more aid than Middle-income countries.

Control variables estimates are significant with the right signs as development aid increases with population growth and economic openness(due to the export substitution effect).

**Table 2: First-stage regressions**

		Net Official Development Assistance(NODA)					
		NODAgdp		NODAMDgdp		NODADACgdp	
		1 <sup>st</sup> Set	2 <sup>nd</sup> Set	1 <sup>st</sup> Set	2 <sup>nd</sup> Set	1 <sup>st</sup> Set	2 <sup>nd</sup> Set
Instruments	Constant	<b>5.927***</b> (3.842)	<b>-3.094*</b> (-1.806)	<b>2.008***</b> (3.030)	<b>-2.592***</b> (-3.522)	<b>3.907***</b> (3.803)	-0.383 (-0.336)
	English	0.174 (0.210)	---	0.513 (1.440)	---	-0.347 (-0.630)	---
	French	---	-0.174 (-0.210)	---	-0.513 (-1.440)	---	0.347 (0.630)
	Christianity	0.155 (0.179)	---	<b>-0.789**</b> (-2.120)	---	<b>0.995*</b> (1.723)	---
	Islam	---	-0.155 (-0.179)	---	<b>0.789**</b> (2.120)	---	<b>-0.995*</b> (-1.723)
	L.Income	---	<b>9.351***</b> (9.195)	---	<b>4.324***</b> (9.896)	---	<b>4.937***</b> (7.291)
	M. Income	<b>-13.048***</b> (-10.99)	---	<b>-5.540***</b> (-10.86)	---	<b>-7.410***</b> (-9.372)	---
	LMIncome	<b>3.696***</b> (2.973)	---	<b>1.216**</b> (2.277)	---	<b>2.472***</b> (2.986)	---
	UMIncome	---	<b>-3.696***</b> (-2.973)	---	<b>-1.216***</b> (-2.277)	---	<b>-2.472***</b> (-2.986)
	Popg	<b>2.439***</b> (5.912)	<b>2.439***</b> (5.912)	<b>1.287***</b> (7.263)	<b>1.287***</b> (7.263)	<b>1.128***</b> (4.108)	<b>1.128***</b> (4.108)
Control Variables	Trade	<b>0.037***</b> (3.471)	<b>0.037***</b> (3.471)	<b>0.019***</b> (4.208)	<b>0.019***</b> (4.208)	<b>0.016**</b> (2.346)	<b>0.016**</b> (2.346)
Adjusted R <sup>2</sup>		0.294	0.294	0.321	0.321	0.216	0.216
Fisher Statistics		<b>47.342***</b>	<b>47.342***</b>	<b>53.563***</b>	<b>53.563***</b>	<b>31.774***</b>	<b>31.774***</b>
Observations		668	668	668	668	668	668

L: Low. LM: Lower Middle. UM: Upper Middle. Ivt: Investment. Pop: population. \*\*\*, \*\*, \*: significance levels of 10%, 5% and 1% respectively. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP. Student statistics ratios in brackets. 1<sup>st</sup> Set: First Set of Instruments. 2<sup>nd</sup> Set: Second Set of Instruments.

## 4.2 Development assistance and quality of government

Table 3 investigates two main issues: (1) the ability of NODA channels to account for GQ dynamics and (2) the possibility of the instrumental variables explaining GQ dynamics beyond NODA channels. Whereas we probe into the first issue by assessing the significance of estimated coefficients, the second is assessed with the Cragg-Donald and Sargan-OIR tests.

The null hypothesis of the Sargan test is the view that the instruments account for GQ dynamics only through NODA channels. Thus a rejection of the null hypothesis is the rejection of the view that the instruments explain GQ dynamics through no other mechanisms than NODA channels. The null hypothesis of Cragg-Donald test is the position that the instruments are weak; thus its rejection points to the strength of the instruments at first-stage regressions. The Hausman-test for endogeneity precedes every IV regression and justifies the choice of the estimation technique. The null hypothesis of this test is the view that OLS estimates are efficient and consistent. Therefore a rejection of the null hypothesis points to the issue of reverse causality (endogeneity) we have emphasized above (see Section 3.2.1) and hence lends credit to the TSLS-IV estimation technique. Otherwise OLS is used in the modeling exercise. For robustness checks, results are replicated using an alternative set of instrumental variables, as depicted in the second and third to the last lines of Table 3. In modeling the unrestricted regressions presented in Table 3, the null hypothesis of the Hausman-test is rejected for all the regressions; confirming the presence of endogeneity and hence the choice of the TSLS-IV approach.

With regard to the first concern which is addressed by the significance of estimated coefficients, it can be firmly established that NODA dynamics significantly decrease GQ dynamics in Africa. It follows that development assistance destined to the African continent, decreases the control of corruption, government effectiveness, political stability, voice and accountability, regulation quality and the rule of law. These results are broadly consistent with the aid-development literature where-in development assistance: increases corruption in ethnically fractionalized countries(Svensson, 2000); worsens bureaucratic quality, leads to violation of the law with greater impunity and more corruption(Knack, 2001) and causes setbacks to democracy(Djankov et al.,2005).

**Table 3: Second-stage regressions without HAC standard errors**

	Control of Corruption			Government Effectiveness			Political Stability		
Constant	-0.631*** (-9.100)	-0.649*** (-9.674)	-0.621*** (-8.519)	0.198 (0.376)	-0.155 (-0.487)	-0.066 (-0.191)	-1.080*** (-2.661)	-1.089*** (-2.704)	-1.093*** (-2.629)
NODAgdp	-0.023*** (-6.010)	---	---	-0.050*** (-5.904)	---	---	-0.026*** (-3.938)	---	---
NODAMDgdp	---	-0.053*** (-6.006)	---	---	-0.087*** (-6.419)	---	---	-0.062*** (-3.979)	---
NODADACgdp	---	---	-0.041*** (-5.781)	---	---	-0.068*** (-6.131)	---	---	-0.046*** (-3.778)
Democracy	0.105*** (5.752)	0.107*** (5.892)	0.104*** (5.475)	0.116*** (4.672)	0.127*** (5.766)	0.116*** (4.834)	0.173*** (6.653)	0.177*** (6.907)	0.171*** (6.377)
Public Investment	---	---	---	---	-0.068* (-1.766)	-0.070* (-1.686)	0.040 (0.838)	0.038 (0.795)	0.043 (0.880)
Hausman-test	49.346***	50.302***	49.910***	103.89***	104.11***	120.05***	26.843***	26.922***	29.052***
OIR-Sargan test	0.039	0.695	0.214	1.603	2.143	0.000	0.199	0.003	0.709
P-value	[0.980]	[0.706]	[0.898]	[0.205]	[0.143]	[0.983]	[0.654]	[0.950]	[0.399]
Cragg-Donald	19.796	19.854	19.641	2.341	4.356	4.389	3.579	3.530	3.616
Adjusted R <sup>2</sup>	0.177	0.172	0.167	0.102	0.205	0.186	0.325	0.324	0.314
Fisher Statistics	34.280***	34.523***	31.793***	21.992***	32.020***	28.389***	27.534***	27.823***	26.081***
Observations	514	514	514	399	443	443	452	452	452
	Regulation Quality			Rule of Law			Voice and Accountability		
Constant	-0.204 (-0.603)	-0.259 (-0.777)	-0.180 (-0.510)	-0.357 (-0.993)	-0.415 (-1.160)	-0.334 (-0.896)	-0.693** (-2.479)	-0.686** (-2.466)	-0.706* (-2.515)
NODAgdp	-0.030*** (-5.371)	---	---	-0.033*** (-5.575)	---	---	-0.008* (-1.876)	---	---
NODAMDgdp	---	-0.068*** (-5.221)	---	---	-0.074 (-5.332)	---	---	-0.021** (-1.968)	---
NODADACgdp	---	---	-0.054*** (-5.263)	---	---	-0.060*** (-5.512)	---	---	-0.014* (-1.772)
Democracy	0.115*** (5.337)	0.121*** (5.712)	0.112*** (4.932)	0.139*** (6.038)	0.146*** (6.399)	0.135*** (5.612)	0.198*** (11.08)	0.199*** (11.26)	0.198*** (10.94)
Public Investment	-0.053 (-1.323)	-0.052 (-1.301)	-0.053 (-1.267)	-0.049 (-1.137)	-0.048 (-1.115)	-0.048 (-1.080)	-0.057* (-1.704)	-0.058* (-1.746)	-0.055* (-1.657)
Hausman-test	48.153***	44.185***	54.739***	81.226***	79.312***	89.942***	46.888***	44.846***	42.808***
OIR-Sargan test	1.890	4.163**	0.612	2.559	5.310**	0.929	0.685	0.338	1.038
P-value	[0.169]	[0.041]	[0.433]	[0.109]	[0.021]	[0.335]	[0.407]	[0.560]	[0.308]
Cragg-Donald	3.568	3.528	3.598	3.579	3.530	3.616	3.579	3.530	3.616
Adjusted R <sup>2</sup>	0.206	0.208	0.191	0.217	0.209	0.211	0.564	0.565	0.562
Fisher Statistics	26.947***	26.797***	25.203***	31.687***	30.848***	29.982***	52.851***	53.084***	52.360***
Observations	450	450	450	452	452	452	452	452	452
First-Set of Instruments	Constant; English ; Christianity; Middle Income; Lower Middle Income								
Second-Set of Instruments	Constant; French; Islam; Lower Income; Upper Middle Income								

\*\*\*, \*\*, \*: significance levels of 10%, 5% and 1% respectively. () : z-statistics . []: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP. For the Cragg-Donald statistics the relative bias is probably less than 5% since the critical value for TSLS bias over OLS is 0.00 (11.04) when four(three) endogenous variables are used.

As to what concerns the second-issue, failure to reject the null hypothesis of the OIR test in all regressions signifies that the instruments do not explain GQ dynamics through some other mechanisms beyond NODA channels. Thus the instruments are valid and not correlated with the disturbance term in the main equation; the instruments do not suffer-from endogeneity. We also report the Cragg-Donald statistics for the strength of the instruments at the first stage of the

TSLS. The alternative hypothesis for strong instrument is not rejected in all regressions, confirming the strength of the instruments. The control variables are significant with the right signs since: democratic institutions improve government quality and public investment is often associated with poor management and corrupt practices in allocation of contracts. According to Ndikumana & Baliaoune-Lutz(2008), the positive association between public investment and corruption supports the view that corrupt bureaucrats aim to increase capital expenditures(over maintenance expenditure) to maximize private gains(rents-seeking). The analysis in Table 3 is replicated with the second-set of moment conditions to confirm robustness of results.

#### **4.3 Development assistance and quality of government(with HAC standard errors)**

Table 4 below presents HAC-TSLS results. On a first note, results of the Hausman-test confirm the choice of our estimation approach. The Sargan-OIR test statistics also confirm the validity of the instruments in all regressions. Broadly findings based on HAC-TSLS regressions confirm those in Table 3; even after the analysis is replicated with an alternative set of instruments. In substance both the NODA regressors and control variables are significant with the right signs.

**Table 4: Second-stage regressions with HAC standard errors**

	Control of Corruption			Government Effectiveness			Political Stability		
Constant	<b>-0.631***</b> (-3.492)	<b>-0.649***</b> (-3.580)	<b>-0.621***</b> (-3.451)	-0.094 (-0.151)	-0.155 (-0.246)	-0.066 (-0.107)	-1.080 (-0.882)	-1.089 (-0.882)	-1.093 (-0.899)
NODAgdp	<b>-0.023**</b> (-2.454)	---	---	<b>-0.038***</b> (-3.071)	---	---	-0.026 (-1.632)	---	---
NODAMDgdp	---	<b>-0.053**</b> (-2.384)	---	---	<b>-0.087***</b> (-3.030)	---	---	-0.062 (-1.639)	---
NODADACgdp	---	---	<b>-0.041**</b> (-2.474)	---	---	<b>-0.068***</b> (-3.010)	---	---	-0.046 (-1.580)
Democracy	<b>0.105**</b> (2.368)	<b>0.107**</b> (2.377)	<b>0.104**</b> (2.347)	<b>0.120***</b> (2.957)	<b>0.127***</b> (3.021)	<b>0.116***</b> (2.907)	<b>0.173***</b> (3.020)	<b>0.177***</b> (3.028)	<b>0.171***</b> (3.016)
Public Investment	---	---	---	-0.070 (-0.936)	-0.068 (-0.887)	-0.070 (-0.955)	0.040 (0.269)	0.038 (0.251)	0.043 (0.292)
Hausman-test	<b>49.346***</b>	<b>50.302***</b>	<b>49.910***</b>	<b>109.52***</b>	<b>104.11***</b>	<b>120.05***</b>	<b>26.843***</b>	<b>26.922***</b>	<b>29.052***</b>
OIR-Sargan test	<b>0.039</b>	<b>0.695</b>	<b>0.214</b>	<b>0.425</b>	<b>2.143</b>	<b>0.000</b>	<b>0.199</b>	<b>0.003</b>	<b>0.709</b>
P-value	<b>[0.980]</b>	<b>[0.706]</b>	<b>[0.898]</b>	<b>[0.514]</b>	<b>[0.143]</b>	<b>[0.983]</b>	<b>[0.654]</b>	<b>[0.950]</b>	<b>[0.399]</b>
Cragg-Donald	---	---	---	---	---	---	---	---	---
Adjusted R <sup>2</sup>	0.177	0.172	0.167	0.204	0.205	0.186	0.325	0.324	0.314
Fisher Statistics	<b>6.416***</b>	<b>6.315***</b>	<b>6.400***</b>	<b>8.675***</b>	<b>9.561***</b>	<b>7.995***</b>	<b>4.962***</b>	<b>5.071***</b>	<b>4.871***</b>
Observations	514	514	514	443	443	443	452	452	452
	Regulation Quality			Rule of Law			Voice and Accountability		
Constant	-0.204 (-0.278)	-0.259 (-0.343)	-0.180 (-0.249)	-0.357 (-0.447)	-0.415 (-0.508)	-0.334 (-0.427)	-0.693 (-1.142)	-0.686 (-1.122)	-0.706 (-1.173)
NODAgdp	<b>-0.030**</b> (-2.542)	---	---	<b>-0.033**</b> (-2.331)	---	---	-0.008 (-0.884)	---	---
NODAMDgdp	---	<b>-0.068**</b> (-2.412)	---	---	<b>-0.074**</b> (-2.203)	---	---	-0.021 (-0.915)	---
NODADACgdp	---	---	<b>-0.054***</b> (-2.594)	---	---	<b>-0.060**</b> (-2.385)	---	---	-0.014 (-0.845)
Democracy	<b>0.115**</b> (2.545)	<b>0.121***</b> (2.644)	<b>0.112**</b> (2.479)	<b>0.139**</b> (2.561)	<b>0.146***</b> (2.631)	<b>0.135**</b> (2.531)	<b>0.198***</b> (5.367)	<b>0.199***</b> (5.457)	<b>0.198***</b> (5.323)
Public Investment	-0.053 (-0.590)	-0.052 (-0.558)	-0.053 (-0.600)	-0.049 (-0.520)	-0.048 (-0.493)	-0.048 (-0.528)	-0.057 (-0.822)	-0.058 (-0.829)	-0.055 (-0.811)
Hausman-test	<b>48.153***</b>	<b>44.185***</b>	<b>54.739***</b>	<b>81.226***</b>	<b>79.312***</b>	<b>89.942***</b>	<b>46.888***</b>	<b>44.846***</b>	<b>42.808***</b>
OIR-Sargan test	<b>1.890</b>	4.163**	<b>0.612</b>	<b>2.559</b>	5.310**	<b>0.929</b>	<b>0.685</b>	<b>0.338</b>	<b>1.038</b>
P-value	<b>[0.169]</b>	<b>[0.041]</b>	<b>[0.433]</b>	<b>[0.109]</b>	<b>[0.021]</b>	<b>[0.335]</b>	<b>[0.407]</b>	<b>[0.560]</b>	<b>[0.308]</b>
Cragg-Donald	---	---	---	---	---	---	---	---	---
Adjusted R <sup>2</sup>	0.206	0.208	0.191	0.217	0.209	0.211	0.564	0.565	0.562
Fisher Statistics	<b>9.415***</b>	<b>9.547***</b>	<b>9.123***</b>	<b>7.991***</b>	<b>8.196***</b>	<b>7.789***</b>	<b>18.040***</b>	<b>18.748***</b>	<b>17.450***</b>
Observations	450	450	450	452	452	452	452	452	452
First-Set of Instruments	Constant; English ; Christianity; Middle Income; Lower Middle Income								
Second-Set of Instruments	Constant; French; Islam; Lower Income; Upper Middle Income								

\*\*\*, \*\*, \*: significance levels of 10%, 5% and 1% respectively. ( ): z-statistics . [ ]: p-values corresponding to OIR-Sargan test. OIR: Overidentifying Restrictions test. NODAgdp: NODA on GDP. NODAMDgdp: NODA from Multilateral Donors on GDP. NODADACgdp: NODA from DAC countries on GDP.

#### **4.4 Further discussion, caveats, policy implications and limitations**

Findings in this paper do not provide much premise for the hope that Western aid can save Africa. Maybe current views on the roots of poverty in the continent are too simplistic and attempts to change these root causes have underestimated the difficulty of doing so from the outside. The failed attempt by the West to rescue Africa through aid does not necessarily imply a disastrous outlook for the continent. Africans on their own will have to achieve economic and political changes that promote economic development and some of these changes are already on course (such as the movement towards freer markets and the expansion of democratic institutions). There are thus hopeful signs of enterprise growth in Africa. The mushrooming of cell phones for example has enabled Africa edge the phase of fixed phones in the development process. Economic development in the continent depends on African private sector entrepreneurs, African civic activists and African political reformers... not on what ineffective, bureaucratic, unaccountable, poorly informed and unmotivated outsiders do.

So if anything, what should the West do for Africa? Just because the West cannot save the continent does not logically imply there is nothing the rich countries can do for the poor there-in. The evidence in the literature (Easterly, 2005a) suggests that aid has been more successful at delivering tangible outcomes like health, education and water. The micro development literature using randomized controlled trials also finds positive effects of some specific development interventions from development assistance. In summary, the West cannot save Africa, but foreign aid can still be beneficial to recipient countries in a piecemeal way to alleviate the sufferings of those desperately poor.

More modest goals from assistance in Africa would make it easier to hold aid agencies accountable for the results of aid-targeted projects. The sweeping ambitions of the current

Western aid efforts in Africa do not lend themselves to accountability, since for the most part the results are contingent on many other factors beside aid agency efforts. Attempts to isolate the effects of these efforts have proved fruitless. More accountable agencies could be encouraged to make greater strides on piecemeal interventions. These modest goals would render the West much less intrusive in Africa, therefore ending the historical tendency towards ever-increasing escalation of Western interventions in the continent. This could be a positive prospect because the intrusive Western role has made African governments accountable to external actors instead of their own citizens. It follows that insiders(those within Africa) have better information and incentives to solve their own problems than outsiders do. Arguably, local democracy that eases citizen feedback have proven to be a more effective vehicle for government quality than outside pressure. On a final note, the more intrusive large-scale interventions have many unintended consequences that are hard to evaluate, a great bulk of which could be detrimental.

Maybe the success of action in society depends on more particular facts than anyone can possibly know. As Hayek(1988) posited *“the curious task in economics is to demonstrate to men how little they know about what they imagine they can design”*. The escalation of Western interventions in the African continent demonstrates an arrogance in the face of very imperfect knowledge. Once economists discard arrogance, there is hope to hold donors accountable for such piecemeal outcomes as well-maintained roads, water supply, medicines, textbooks and nutritional supplements to improve the well-being of the poorest people in the world. It is therefore a momentous time to solve the second tragedy of foreign aid; it is great time for economists and policy makers to start rethinking the models and theories on which foreign aid is based. In the meantime, it is up to people who really care about the poor to hold aid agencies accountable for results.



An important limitation worth mentioning is that this kind of analysis depends to a great extent on the integrity of the proxy for GQ obtained from perception-based measures. Thus omitted variables and media-effect could significantly affect perceptions of GQ and consequently bias the link between the aid indicators and the GQ performance measures. However, to the best of our knowledge there are no better measures of GQ than those from African Development Indicators of the World Bank. The paper has limited this setback by using six different indicators of GQ. Also the employment of a methodology that takes endogeneity into account addresses concerns of omitted-variables and bias in the perception-based measures.

## **5. Conclusion**

For over five decades the political economy of foreign aid has been widely debated in academic and policy-making circles. A large literature on institutions and development suggests that Africa is poor because it has poor institutions: dictatorship, lack of property rights, weak courts and contract enforcement, high corruption, political instability, violence and hostile regulatory environment for private business. In assessing the impact of development assistance, a great bulk of studies have focused on the effect of aid flows on GDP growth and other macroeconomic variables (investment or public consumption). The underlying assumption here is that aid is destined to bridge the saving-investment gap poor countries face (Rostow, 1960; Chenery & Strout, 1966; Easterly, 2005a). Surprisingly there has been much less research conducted on the impact of foreign aid on the evolution of government institutions.

This paper has assessed the effectiveness of foreign aid in improving government institutions in 52 African countries using updated data (1996-2010). Findings suggest development assistance deteriorates government quality dynamics of corruption-control, political-stability, rule of law, regulation quality, voice and accountability and government

effectiveness. Maybe the success of action in society depends on more particular facts than anyone can possibly know. As Hayek(1988) posited “*the curious task in economics is to demonstrate to men how little they know about what they imagine they can design*”. The escalation of Western interventions in the African continent demonstrates an arrogance in the face of very imperfect knowledge. Once economists discard arrogance, there is hope to hold donors accountable for such piecemeal outcomes as well-maintained roads, water supply, medicines, textbooks and nutritional supplements to improve the well-being of the poorest people in the world. It is therefore a momentous time to solve the second tragedy of foreign aid; it is great time for economists and policy makers to start rethinking the models and theories on which foreign aid is based. In the meantime, it is up to people who really care about the poor to hold aid agencies accountable for results.

## Appendices

### Appendix 1: Summary Statistics

	Variables	Mean	S.D	Min.	Max.	Observations
Development Assistance	Net Development Assistance(NODA)	10.811	12.774	-0.251	148.30	704
	NODA from Multilateral Donors	4.481	5.512	-1.985	64.097	704
	NODA from DAC countries	6.244	8.072	-0.679	97.236	704
Government Quality	Control of Corruption	-0.603	0.628	-2.495	1.086	611
	Government Effectiveness	-0.665	0.606	-1.853	0.807	587
	Political Stability	-0.563	0.963	-3.311	1.143	624
	Regulation Quality	-0.673	0.673	-2.729	0.905	620
	Rule of Law	-0.700	0.686	-2.691	1.053	622
	Voice and Accountability	-0.678	0.739	-2.174	1.047	624
Control Variables	Population growth	2.359	1.015	-1.081	10.043	780
	Trade	78.352	39.923	17.859	275.23	705
	Democracy	2.307	4.089	-8.000	10.000	735
	Public Investment	7.489	4.535	0.000	39.984	641
Instrumental Variables	English Common-Law	0.384	0.486	0.000	1.000	780
	French Civil-Law	0.615	0.486	0.000	1.000	780
	Christianity	0.634	0.481	0.000	1.000	780
	Islam	0.365	0.481	0.000	1.000	780
	Low Income	0.576	0.494	0.000	1.000	780
	Middle Income	0.423	0.494	0.000	1.000	780
	Lower Middle Income	0.230	0.421	0.000	1.000	780
	Upper Middle Income	0.192	0.394	0.000	1.000	780

S.D: Standard Deviation. Min: Minimum. Max: Maximum.

## Appendix 2: Correlation Analysis

Quality of Government						Dev. Assistance			Control Variables				Instrumental Variables								
CC	Gov.E	PolS	R.Q	R.L	V&A	TA	MLD	DAC	Popg	Trade	Demo	Publ	Eng.	Frch.	Chris	Islam	LI	MI	LMI	UMI	
1.000	0.846	0.691	0.733	0.871	0.668	-0.14	-0.12	-0.14	-0.28	0.157	0.491	0.212	0.118	-0.11	0.133	-0.13	-0.32	0.322	0.071	0.327	CC
	1.000	0.659	0.806	0.890	0.703	-0.27	-0.25	-0.24	-0.36	0.115	0.459	0.123	0.293	-0.29	0.057	-0.05	-0.42	0.424	0.156	0.361	Gov.E
		1.000	0.643	0.802	0.661	-0.14	-0.12	-0.14	-0.22	0.312	0.528	0.252	0.060	-0.06	0.171	-0.17	-0.26	0.266	-0.03	0.367	PolS
			1.000	0.816	0.715	-0.24	-0.22	-0.23	-0.19	-0.00	0.519	0.078	0.134	-0.13	0.077	-0.07	-0.27	0.274	0.106	0.231	R.Q
				1.000	0.728	-0.20	-0.17	-0.20	-0.29	0.173	0.536	0.224	0.164	-0.16	0.115	-0.11	-0.35	0.357	0.084	0.359	R.L
					1.000	-0.00	-0.00	0.002	-0.15	0.041	0.755	0.025	0.255	-0.25	0.226	-0.22	-0.15	0.152	-0.08	0.279	V&A
						1.000	0.900	0.955	0.368	-0.10	-0.03	0.195	-0.05	0.050	0.058	-0.05	0.450	-0.45	-0.26	-0.28	TA
							1.000	0.733	0.400	-0.09	0.011	0.220	-0.03	0.035	-0.00	0.006	0.475	-0.47	-0.28	-0.29	MLD
								1.000	0.304	-0.09	-0.05	0.141	-0.05	0.056	0.098	-0.09	0.382	-0.38	-0.22	-0.24	DAC
									1.000	-0.25	-0.06	0.043	-0.10	0.107	0.008	-0.00	0.425	-0.42	-0.22	-0.29	Popg
										1.000	0.016	0.175	0.176	-0.17	0.181	-0.18	-0.35	0.35	0.137	0.294	Trade
											1.000	0.147	0.177	-0.17	0.163	-0.16	-0.03	0.034	-0.16	0.228	Demo
												1.000	-0.13	0.138	0.008	-0.00	-0.04	0.049	0.002	0.059	Publ
													1.000	-1.00	0.189	-0.18	-0.04	0.043	-0.05	0.115	Eng.
														1.000	-0.18	0.189	0.043	-0.04	0.057	-0.11	Frch.
															1.000	-1.00	-0.00	0.003	-0.15	0.167	Chris
																1.000	0.003	-0.00	0.153	-0.16	Islam
																	1.000	-1.00	-0.63	-0.56	LI
																		1.000	0.639	0.569	MI
																			1.000	-0.26	LMI
																				1.000	UMI

CC: Control of Corruption. Gov. E: Government Effectiveness. PolS: Political Stability or No Violence. R.Q: Regulation Quality. R.L: Rule of Law. V& A: Voice and Accountability. TA: Total development assistance. MLD: Development Assistance from Multilateral Donors. DAC: Development Assistance Committee. Popg: Population growth. Demo: Democracy. Publ: Public Investment. Eng: English Common-Law. Frch: French Civil-Law. Chris: Christian Religion. LI: Low Income. MI: Middle Income. LMI: Lower Middle Income. UMI: Upper Middle Income.

### Appendix 3: Variable Definitions

Variables	Signs	Variable Definitions	Sources
Net Development Assistance(NODA)	NODAgdp	NODA(% of GDP)	World Bank(WDI)
NODA from Multilateral Donors	NODAMDgdp	NODAMDgdp(% of GDP)	World Bank(WDI)
NODA from DAC Countries	NODADACgdp	NODADACgdp(% of GDP)	World Bank(WDI)
Control of Corruption	CC	Control of Corruption(estimate)	World Bank(WDI)
Government Effectiveness	Gov. E	Government Effectiveness(estimate)	World Bank(WDI)
Political Stability/ No Violence	PolS	Political Stability/ No Violence (estimate)	World Bank(WDI)
Regulation Quality	R.Q	Regulation Quality (estimate)	World Bank(WDI)
Rule of Law	R.L	Rule of Law(estimate)	World Bank(WDI)
Voice and Accountability	V & A	Voice and Accountability (estimate)	World Bank(WDI)
Trade(Openness)	Trade	Imports plus Exports in commodities(% of GDP)	World Bank(WDI)
Population growth	Popg	Average annual population growth rate	World Bank(WDI)
Democracy	Demo	Level of Institutionalized Democracy	World Bank(WDI)
Public Investment	PubI	Gross Public Investment(% of GDP)	World Bank(WDI)

WDI: World Bank Development Indicators. DAC: Development Assistance Committee.

## Appendix 4: Presentation of Countries

Instruments	Instrument Category	Countries	Num.
Legal-origins	English Common-Law	Botswana, The Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Uganda, Zambia, Tanzania, Zimbabwe.	20
	French Civil-Law	Algeria, Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Egypt, Eritrea, Equatorial Guinea, Ivory Coast, Ethiopia, Gabon, Guinea, Guinea-Bissau, Libya, Madagascar, Mali, Mauritania, Morocco, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Togo, Tunisia.	32
Religions	Christianity	Angola, Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Congo Republic, Congo Democratic Republic, Ivory Coast, Equatorial Guinea, Ethiopia, Eritrea, Gabon, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Sao Tome & Principe, South Africa, Swaziland, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	33
	Islam	Algeria, Burkina Faso, Chad, Djibouti, The Gambia, Egypt, Guinea-Bissau, Guinea, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tunisia.	19
Income Levels	Low Income	Benin, Burkina Faso, Burundi, Central African Republic, Chad, Congo Republic, Congo Democratic Republic, Djibouti, Ethiopia, Eritrea, The Gambia, Ghana, Guinea-Bissau, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Togo, Uganda, Zambia, Tanzania, Zimbabwe.	30
	Middle Income	Algeria, Angola, Botswana, Cameroon, Cape Verde, Egypt, Ivory Coast, Equatorial Guinea, Gabon, Lesotho, Libya, Mauritius, Morocco, Namibia, Nigeria, Senegal, Seychelles, Sao Tome & Principe, South Africa, Sudan, Swaziland, Tunisia.	22
	Lower Middle Income	Angola, Cameroon, Cape Verde, Egypt, Ivory Coast, Lesotho, Morocco, Nigeria, Sudan, Swaziland, Tunisia.	11
	Upper Middle Income	Algeria, Botswana, Equatorial Guinea, Gabon, Libya, Mauritius, Namibia, Sao Tome & Principe, Seychelles, South Africa.	10

Num: number of countries

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